

*On the Insensible Gradation of Words, by J. P. Lesley.*

What practically happened years ago to every *fossil*—namely, to be studied in isolation, its surroundings and alliances unknown, is still to a great extent, the fate of those fossils of the intellectual world, *words*. When a word spoken by the people on this side of the globe is seen or heard to be like a word spoken by the people on the other side, if the meanings attached to its duplicate utterance can be allied, and especially if several such alliances can be catalogued, although merely as bald facts, ethnological reasoning upon origins and migrations is at once proceeded with. It cannot be denied that the science of comparative philology, although by no means in its infancy, labours under the defects of this rude method. Its grammars indeed are getting to be finished and proper tools for the scientific workman, but its vocabularies are still of a barbarous and impracticable kind, mere museums of popular curiosities. It still remains a subject for future demonstration, that in philology, as in palæontology, the boundaries of genus and species are to be accounted conterminous; that the organic forms pass into each other by almost insensible gradations; and that not by hazard but by plan; and finally not by a plan dependent upon the merely accidental variation of radical elements, but on a plan of the variable and alternate development of members of a complex structure.

Philology, as to its history, has three departments. First, the purely organic, containing all such involuntary or animal utterances, as the different species of men make, for the same natural reason that different species of animals quack, cluck, crow, scream, bark, bray, howl or roar, each with sounds fixed by the quality of its organs and by the emotions of its inner nature. It is to be expected that the child's organs will utter modifications of a given sound uttered with the same intent by an adult; and that one child will prefer guttural and another child labial utterances. It is reasonable, also, to expect that the African, the Malayan, the Esquimo, the Germanic groups of languages will be radically characterized by different soft and hard expressions, by liquid prefixes or guttural affixes, by sibilants, chucklings, and murmurs of their own, as we find they actually are. The study of this department has been vigorously prosecuted in one direction by able men, among whom, in this country, Kraitzer and Haldeman may be named as taking the lead. These have pointed out a multitude of true natural expressions. They tell us, for instance, that the Latin *ex*, *K*, *S*, and the English *ou-t*, may

be known by the very sound itself to mean expulsion from the inside outward. And so of many other words. But the range of this investigation has been hitherto kept narrow by the neglect of the other direction in which these studies should move on. No one has yet seriously taken up the true characteristics of natural language, such as the clucks of Oregon and Caffraria, the final K of the hypoborean race, the infantine TL of Mexico and other local regions, the softly vocalized finals of Southern Europe, the utter abandonment of the Polynesian race to vowelism, the monosyllabic humour of the Sinitic stock, to study these in the same spirit with which Gardner and Nuttall studied the sounds of birds; to study them, in fact, in connection and in harmony with other specific differences of men not as *men*, but as *animals*. Yet until this is done, comparative philology has obtained no starting point.

The second department of philology is that of pure Bardic or Mythologic words—words which are to be studied as *inventions* and not as *involuntary organizations*; to be regarded truly as fossils, scattered, fragmentary, inverted, pseudo morphed; and, when understood, instructing us far more likely about migrations of mind than of body; rather about the exodus of priesthoods and sects than of races; about a picturesque, mysterious propaganda of symbols by priests and their initiated, and not about the carriage of household sounds, war cries, or love whispers, from one locality or habitation to another, by men still half animals.

And the third department of philological investigation deals with these same empirical constructions, these originally crystallized bardisms, not in their first forms, but in their secondary or sedimentary condition, as words broken down, pulverized, readjusted and cemented; as words with some of their elements abstracted and with new elements infiltrated; tinged by climate and social habits, and metamorphosed by the logic, art and science of successive generations. To use a geological simile, there are many *primary* regions of philology like Bretagne and Western Ireland, Northern Spain, Dalmatia and the Caucasus, Ceylon, New Holland, or any other remote and secluded lands, where the elementary sounds of the ancient wordmakers still present themselves for comparison and analysis almost in their original phases. On the other hand most of the languages of the world and all the languages of the historic, artistic and scientific nations are of a genuine *secondary* order and need to be studied first as to their grosser ingredients, and these again secondly in a finer analysis. And one object of the charts presented here is to show in

reference to this last, that a few elements of a primary order are everywhere employed in language as in chemistry, to construct elements of a second order and a third and a fourth, by a few simple laws of change, in such a series of gradations, that any word out of the thousand used commonly by any people may be selected indifferently and discussed with the same results as any other word; that even any given compound word will be found present in some well recognized form in nearly all the languages known, and yet will have different meanings in most of them; that there is therefore not the most distant approach to a common or universal language for all mankind beyond the fact that all use the same elements in the same endless round of composition, and cannot get out of this round; that the presence of the same words in two or more languages is therefore no *prima facie* evidence of kinship between the two or more tribes speaking those languages; that, therefore, ethnology cannot be considered as having yet taken hold of philology as one of its tools by the right handle, or turned it to any useful purpose beyond the determination of very local questions. It can be shown, probably, that the study of philology must be distributed between—first, a strict investigation by expert naturalists into the primary animal sounds made by the species or varieties of mankind; secondly, an investigation of those words in hieroglyphic, classical and mediæval history and mythology which remain to represent those old introduced non-animal, transcendental ideas by invented signs, by arbitrarily attached sounds, and by mysteriously arranged syllables; and thirdly, the classification of all words used to express such ideas in modern times, according to the laws now so well understood and obeyed in the study of chemical elements, fossils, and objects of the actual nature.

The charts appended to this paper will speak for themselves in explanation of these views. They represent the gradual passage, through groups of forms, of the names which mankind have given to the five objects, MAN, HEAD, HAIR, HAND and STONE, in 200 languages, more or less. They have been made up from the Russian Comparative Vocabulary of Catherine I, from the Mithridates, from Comparative Vocabularies of the dialects of the Caucasus, from Hale's Volume of the Exploring Expedition, and a few other sources of information open to all. Very few of the African words, however, are given, and only enough American words for comparison, as the object was to illustrate the subject, not to furnish a perfect specimen. In selecting letters the expression of the sound has been kept in view as the primary object, where it did not conceal the graduation. Hence

K is used for C, TJ for Tsch, &c. but no rule has been exactly observed throughout. Sometimes Sh is expressed by S, at other times the importance of the H is shown by writing it in full.

The chief design has been to show how by prefixes and affixes, by the dropping out of medials, and the rejection now of the first and now of the last element, an almost infinite series of changes not only can be permitted, but have actually realized themselves in the languages and dialects of the earth; how that no idea can be technically said to be expressed by man labially, or dentally, or gutturally, or nasally, seeing that the very same series of dissyllables which in one direction ends in a single labial, is sure, when followed in another direction, to end in a dental, and when followed in a third direction, to end in a guttural or nasal; while the very same simple guttural, dental, or labial, reappears in the different series as a vehicle for different ideas. To illustrate by an example or two:—

HAIR, from such double full forms as GURuGURu (197), CyPy' HUiR (153), tJe'RaChe'R (159), &c., passes down through one long range of changes to become a simple labial Fa (164), and through as long a range of changes in another direction, to become a simple dental oT (69). MAN passes on from similar full forms down to such simple forms as Mo, Tshu, or  $\chi\text{oi}$ . STONE becomes To, Ko, aL, aN, iSH and öFe. On the other hand, and to illustrate the other phase of the law, CaLGaSSen (137) means Hair,—KuDaCeS (58) means Man,—and CiT'XiN (158) means Head. MieZ (56), MeS (57), mean Man, while MaZda (171), MaZ (107), mean Hair. HaiR in English and XeiR Hand in Greek, GoiR Man and KeR Stone, cannot be distinguished philologically. Many other like instances will appeal to the eye, without further remark; and would be innumerable had we some scores of such tables made out.

It follows, from facts like these, that two theories respecting the great body of monosyllables must be adopted. First, they do not belong to the organic primary sounds by which our involuntary animal nature utters itself, and so their study in that department will be a failure. It is evident that a *stone* or a *bird* cannot relate itself indifferently to *all* the organs of speech in turn, if *that* be the kind of relation by which it gets itself named. If, for instance, its original organic name, not invented but simply exasperated by all mankind unconsciously, be TO, then it could not be KO, nor could it be ISH, nor AN, nor öFe. Are these then alterations? but if that be once granted, the science of Comparative Philosophy commits suicide. Secondly, the great body of monosyllables so far from being originals

are fragments. All language is a breccia, or rather it resembles the great fossiliferous lime-rocks of the coal measures, full of the parted joints of encrini, once connected into living, waving, propagating stems and flowers of stone. In the construction of charts like these one can see how the stems came to be disjointed, and the isolated discs to be so strewn hither and thither among the secondary sediments of speech, the dialects of different tribes. To illustrate this: here is one actual formula of fragmentation.

G	U	Ru	G	U	Ru	} Hair	{	}	197												
	U	Ru		U	Ru					}	{	}	196								
		Lo		U	Ru									}	{	}	191				
			H	U	Ru													}	{	}	196
				U	Ru																

Here we have the reduplicated form of the compound guttural, labial and lingual, and the dropping away of one part after another, until nothing but the end remains.

The selection of these five particular objects of speech was made because they are among the most familiar to men, and have simple or unequivocal meanings, and therefore ought to be named alike in all languages, if such a fact were possible. Yet we see how they merely play different groups of runs upon the same gamut. They were selected also as good examples of a principal or type arrangement of the elements in the full form, Ka Ba Ra Ta, the historical meaning of which I have endeavoured, in papers read before the American Association, to illustrate. There are undoubtedly many such type forms, all of which can be wrought out by this method of visible classification.

The positive results to be arrived at then seem to be these—1. The same radical sound, Ba for example (modulated of course as Pa, Fa, Va, Wa, Ma), can be found in a large majority of languages, standing as a name for a majority of the objects of thought expressed by speech.

2. In the midst of this apparent wilderness of confusion, a very evident order will come to view, when all the sounds employed to represent one idea are classified in vertical columns; and this order will consist in their various *groupings*. Each idea is indeed expressed by all the signs known to the ear of man, but is *most often* expressed, or in other words is expressed by *the greater number of mouths*, in one kind of way, that is, by one group of analogous words larger than all the other groups. The idea will be recognised as having, so to speak, a greater run upon one set of elements or combinations. And we may hope that as Lesquerox has succeeded in recognizing each

successive coal bed, not so much by any individual fossil, as by some different group of plants, the plants themselves being nevertheless found in higher and lower beds than the one so marked, we in like manner will be able to distinguish languages ethnologically by this grouping of forms of words common to all, under special ideas.

3. Charts like these prove the reality of certain facts in philology sometimes doubted; the reality, for instance, of *derivative reversion*; as in the Greek λογ, Hebrew קל; Go-bo-l, becomes Go-lo-ba, &c. This will be of importance in discussing the kinship of neighbouring nations with inverted names such as Dorians and Rhodians, Italians and Latins, Berbers and Arabs, &c. I have pursued my own researches for some years with this in view as an established fact, that the boustrophedon manner of writing is a reality in etymology and ethnology, as it was in mythology and common history. It made no difference to the inventor of a word whether one symbol or another came first, for he did not write to express a previously known sound (as we do), but set down the symbols of his ideas and afterwards *accepted* the sounds they gave him. In other words, in this department of philology letters make words and not words letters.\*

4. It seems to be evident that the liquids and dentals, as a rule, *replace* each other not by *alteration* but by *alternation*, for none of these columns worked well until the L's and R's were put under one head and the Ts, Ds and N under another. There are, of course, many exceptional cases of true organic mutation.—In like manner it seems clear that the terminal NG of many languages is not a mere nasality, but that the G is the relic of a lost syllable beginning with a guttural.

5. The loss of consonantal elements is seen to be indicated by the presence of diphthongs or groups of vowels, and especially by the concentrated diphthongs O and U. Also, the fact appears that not only any diphthong, but any strong vowel, can in time come to replace not the labials only but any one of all the consonants; and our only salvation from this utter confusion to result from such a law—a veritable law of disorder or decomposition—is a systematic and general classification of words, not according to men's theories of etymological relationships, but in a mechanical way, as we classify fossils and

\* Dr. Pickering has drawn my attention to the curious adventure, reported by Hale, of certain New Zealand savages who were drifted to another and distant island, and commemorated their salvation on its shores by deliberately reversing their whole vocabulary, pronouncing every word backwards.

minerals, in tables and in columns, to let their groupings reveal themselves, and then we can begin again with our philological arguments on ethnology.

Some of the Changes through which the Word *STONE* passes in

P T		Egyptian, shaft of a column, (Bunsen)		
La B	Pa T	} (13)	Celtic	
Te B			50	Lesgin (antsug) Caucasia,
Di Pa		(171)	Pehlvi	
Te Bou			Karib	} American.
Tu Mu			Sapibocoro	
Ru Mi			Quichua	
La Pi S		(22)	Latin	
La a S			Greek	
La Pi De		(23)	Italian	
Pa Ta R		167	Moultani	} India
Pa aT R		168	Bengali	
Pu Ou R		169	Decan	
Py TTeR		(177)	Malabar	
Pe T Ra		21	Romaic	
Pe D Ra		26	Portuguese	
Po r Ra		29	Vallzan	
Pi eT Ri		46	Volosch (Walachian)	
Pi er Re		(28)	French	
Pe i Ro		(27)	Romance	
Pi o R Na		25	Spanish	} E. Asia.
Bo i Na		162	Kurile Isles, E. Asia,	
Pj u N		126	Tomscago ocr	
Fu a LLa		125	Tavgin	
Fa TTu		188	Magendie, (Australia).	
u Fa Tsh		160	Kamschatka (Joznye)	} N. E. Asia.
Ua Tsh		158	„ (Tigil)	
a Tu R		} 80	Dugor	} Caucassian
Do R				
Du R		79	Oset	∞ RTo
Ta RRua		15	Basque	∞ RoT
Je Re Ra		(171)	Pehlvi	∞ LiΘα
Dzo La		145	Lamut N. E. Asia.	(N. E. Asia.)
DzjuL		} 144	Tungus Ocotsck Sea	168 Tangutch
Jo L			64	Tshjobasch in Russia.
Dzo Lo		(143)	} Tungus	} Greek.
Sho Lo		(141)		
Zhu Lo		(146)	Tschapogir	
Jio LLo		(141)	Tungus	} N. E. Asia.
Zho LLo		} 139	Tungus	
DiSo LLo				
Ja Lo		138	Tungus	
TshaLo		135	Mongol	
TsheRu		117	Casi-cumit	} N. E. Russia.
TshaR Tsh		119	Acuschen	
TshuLu N		137	Calmuck	} E. Siberia.
Sha Lu N		} 136	Brat	
Tshe Lo N				
STi R N		38	Islandic	
STa ai N		} 36	Cimbric	} Europe.
STo a N				
ST a N				
ST ei N				
ST ai Na		33	Teutonic	
ST ai Ns		30	Gothic	
ST eo N		(40)	Dutch	
ST e Na		(13)	Celtic	
ST o Ne		32	English	
ST a N		31	Anglo-Saxon	
ST e N		34	Old high German	
ST eeN		37	Danish	
ST e N		39	Swedish	
ST i NG		41	Frizian	



*the various Languages of Asia, Europe and America.*

Ce T Rus	12	Susdalian (Europe)
Ha DzaR	}	85 Arabic
Ge Je R		
Hi Ntzo Zo	118	Andu (Siberian)
Gi T	(152)	Lumpocol „
Co Du	(27)	Romance
Ge D	}	58 Lopar (S. Russian)
Ca i LLe Ca		
Ce Ra	}	116 Tuschet } Siberian Tartar
Gu R		
Gu L	45	Albanian (Greece)
Ca Lo C	53	Lesquiz-dido (Caucasus)
Ca La Zh	16	Irish
Ca RreG	17	Gaelic
	(18)	Welsh
Tu La K	114	Tschengis Tartar.
u Ju Ra K		Greenland Esquimaux
Ro CCo	24	Neapolitan
Ro CK		English

Te R P

Comanche

Cu	66	Vogul	} Russia N. E.
Cy	(63)	Tscherimiss	
Cj e	47	Wenger (Hungary?)	
Ce i	(40)	Dutch	
Cj Ui	(63)	Tscherimiss (Russia N. E.)	
Ce U	(71)	Oseti, 2. }	} Caucasus
Ci B	70	Oseti, 1. }	
Co B	(67)	Vogul, 2.	} Russia
Ca B	61	Mord	
Ce B	62	Moscow?	
Ci Bi	56	Corel	
Ci Bi	(55)	Ostland	
Ci Bi	}	54	Tschjochous
TShiBi			
TSi Bi	}	(55)	Ostland
Ci BBi			

Ta	NGa	131	Taigin	} Polar-Russian			
Ta	NGaiT	(130)	Carassin				
Tu	NuNG		Lake Macquarie (N. Holland)				
De	Nai	123	Samoiede		Tschuktsch N.W.Am.	Ui Ga K	
i	NGa	142	} Tungus		Armenian	(107)	Ga Ca R
i	Na	141				Maltese	86
Sa	NGa	(177)	Malabar		Abassinian	113	HauC
Se	NG	} 76	Persian		Abassinian	112	Ha C
Sa	NG					Illyrian	(3)
Se	NC	77	Koord		Osetian, 3, 4.	72	Co χ
Se	NG	102	Bocharian		Osetian, 5.	74	Cuuχ
Sa	Xum	(22)	Latin	====	Romance	(27)	CoCS
Sa	SSo	(23)	Italian				
Shi	Sh	149	Cotob	} Asia			
Shi	Sh	150	Assan				
Shi		164	Chinese (Cipaïsk)				
i	Sh	161	Japanese (Éponsk)				
Zha		(146)	Tschapogir N. E.				
i	Z	59	Zuren	Asia.	Cabarda		{ My Vy
i	Z	60	Permian		Caucasian	111	{ My VVa
i	Z	65	Votet		Camashin	132	Fi
Tsi	S	(27)	Romanch		Carassin (130)		Py
TshyS		152	Lumpocol		Samoid (128)		Py
Tye	S	151	Inbat		Coibal	133	Pi
Ta	S	88	Turian	}	Samoid	127	Po
Ta	S	89	Kasan			Samoid	129
Ta	S	90	Mestsh.		Osetian (75)		Pj u
Ta	S	91	Bashkir		Samoid (123)		Pu i
Ta	S	92	Nogai		Polynes.	197	We i
Ta	S	93	Rodac		Samoid	121	Pa i
Ta	S	94	Tobolsk		Samoid	120	{ Pa o
Ta	S	95	Tshatse				{ Pa Co
Ta	S	96	Tschol.		Manchu	163	Fe χ <sup>e</sup>
Ta	S	98	Cusnet		Tschjoc.	157	Fu Go N
Ta	S	99	Barab				
Ta	S	101	Teleutsch				
Ta	S	103	Khivan				
Ta	S	104	Kirguis				
Ta	S	105	Turcoman				
Ta	S	106	Ecut				
Ta	Zh	97	Enesei Tartar				
αχ	To	} 58	Vogul on Tscherdyma				
αχ	Ti			T			
Ge	T	So	48	} Abari Caucasian			
χ <sup>ε</sup>	T	So	51		Lesquis dzar		
i	T	So	52	„ χunzag			
αχ	Ty	T	69	Vogul on Berezou			
αχ	To	T	67	„ on Berecotursk.			
Ho	Ta	Tai					
	Te	Te Te		Cora (New Mexico)			
	Te	TL		Mexican			
	Te			Koljusch N. W. coast America			
i	Ta			Brazil (3 dialects)			
To	i	(128)	Narymscargu ocruga (Samoyed)				
To		(71)	Ostet on the Naryma (N. Russia)				

Ci Pa	87	Assyrian	} S. E. Asia.
Ce Fo	84	Syrian	
C Ua	109	Imeretian (Caucasus)	
Ce Fa	110	Cuban	
Ce Fa	108	Cartalin	} N. E. Asia.
Ce Fa R	(107)	Armenian	
C Ua L	155	Corean	} N. E. Asia.
C Ua Li	159	Kamschatcadale, 2.	
Gi Be R		Sidney	} New Holland
Bu Ra		Muruya	
Ma Ra Ma		Peel River	
Yu Ru BaNG		Bathurst	
Wa La NG		Wellington	} N. W. Europe
Ba Re	166	Tsygan (Himalaya?)	
Be R	(177)	Malabar (India)	} N. W. Europe
Me a N	19	Cornish	
Ma o N	14	Breton	
Ma o N	(18)	Welch	} E. Europe.
aC Mu o	42	Lithuanian	
aC Me NS	(43)	Lettish	
aC Me NS	44	Crivingo Livonian	
Ca Mj e N	(3)	Polish	
Ca M me N	(3)	Illyrian	
Co Mi N	8	Polabsk	
Ca Mi N	0	Russian	
Ca Mi N	1	Old Schlavonic	
Ca Mi N	4	Bohemian	
Ca Mi N	5	Serbian	
Ca Mi N	6	Wendish	
Ca Mi N	7	Sorabish	
Ca Mi N	11	Malo-Russian	
Ca M N	2	Slavo-Hungarian	
Ca M	9	Cashub	
Gu FF o N	153	Corean (E. Asia).	} S. W. Asia.
Oi F e N	82	Zidonian?	
a F Nu	83	Chaldee	
ö F e N	81	Hebrew (128)	
ö F e	(27)	Romanch (S. Europe).	} Hungarian {
Ko		Stone	
Ko Va		Flint	
Ko Mo C		Sand	
Kö Ve CK		Gravel	} Sahidic Coptic
Oo Ne		Memphite Coptic	
Pi, the } oNe		Sahidic Coptic	
masc. artic } oNi		Coptic	} Egyptian (Bunsen Vol. 49).
Pi, ,, aL			
A N			

Before passing to another example, a few words seem necessary here. It is evident that the scheme of radicals to represent the above table of words is the following:—

T  
 P  
 LP  
 LPT  
 PT  
 PTR  
 TR  
 TRN  
 (TRP) once  
 TR K  
 R K  
 K  
 KB  
 KBR  
 BR  
 K R  
 K RK  
 K K

It is equally evident that this scheme would be improved, if it were not actually completed, had we the words meaning *Stone* in all the other languages of the earth, four hundred more or less. In which case assuming only the three principal contacts and keeping within the range of trilaterals, it might be represented thus:—

P  
 PT  
 PTK  
 P K  
 TK  
 TKP  
 T P  
 KP  
 KPT  
 K T  
 TK T  
 P KP  
 P P  
 KP P  
 KP K  
 K K  
 K  
 K TK  
 TK T  
 T T  
 T

But if, as we see by the above chart would take place, instead of only the three primary contacts P, T, K, we must add the lingual L or R as distinct from T, and in fact a fourth primary element, while N plays a prominent role as primary grammatical affix, it is easy to imagine the great extent to which the perfected scheme will descend. The point of remark, however, is this:—the scheme is not one made up artificially like a row of arithmetical numbers or algebraic figures, to see how many different compounds of three or four or five elements exist *arithmetically* in the abstract; on the contrary, it results from a process of alternate growth and decay, of alternate additions and elisions, or of alternate expansions of expression and contractions, under the influence of two very different, opposite but co-ordinated laws of speech, by one of which the human mind endeavours always to enlarge and make more precise its words for better comprehension, and by the other to shorten and sweeten them for use. Thus language has a phyllotaxis of its own, by which its stem is regularly occupied to the utmost possibilities of the occasion.

As to the aboriginal meaning of these words for STONE, or which came first, or what radicals are original prefixes and what are affixes, these are recondite questions not involved in this discussion, and perhaps impossible to answer.

It may, however, not be uninteresting to point out as a possible key to some of these riddles, the form PTR, PTL, contracted to P'R, P'L, (Romance *Peiro*, Coptic *Pial*, c. Boina, Piorna, Pjun, Fualla, &c. &c. in the chart), which explains at all events the Greek  $\pi\epsilon\tau\rho\alpha$ , as P- Tor, the tor, the tabor, the taurus, the tower, meaning *the rock* or stone; and shows why the Apostle of the keys was chosen to bear the church. The sermon was on the mount. But these suggestions are foreign from the subject of this paper.

The Greek  $\lambda\iota\theta\omicron\varsigma$  seems to be as true an inversion of tor, or tel, as the Tangutch RTo evidently is. And here mention cannot be omitted, however casually, of the intimate mythological connection between the ideas of STONE and MAN in language. RT was the Egyptian, ROT the Coptic word for both, while ReT meant form, species, sculpture; and herein lies the explanation: the principal bardic use of stone was to represent the human form divine, whether in sculpture on the native rock or propylon wall, or as set up in ambrose stones alone or in circles, or as termini, caryatides, images, or columns in the temple. Idolatry being ancestral worship, the stone PaTaR had the same name as father,  $\pi\alpha\tau\epsilon\rho$ , and all standing stones were legendary giants, or patriarchs turned to stone in some past age of human magic

or divine wrath. Yet in the next chart which gives the words for MAN in the same languages (designated not by their names but by ciphers to save space) the whole grouping of the chart is different. A different aspect pervades the columns, and the prevalence of certain forms stamps a peculiar character upon the series.

*Some of the Phases of the Word MAN.*

Ma	N	32, 36
Ma	Na	30
Ma	Nd	37)
Ma	DuR	} 38
Me	NeSCia	
Me	NeSCe	37)
Me	NiSC	31
Me	NiSCo	} 33
Me	N SH	
Mi e	NiSHa	39
Me	N SH	35, 40, 51
M I	N SH	34
e	NaSH	83)
e	NoSH	84
	NaSHa	17
	I N SHaN	8
	I N TH	85)
	I SH	81)
O I	D TS	163)
a I	Nu	162
Mo	No	Japan
Ma	Nii	165
a I	T	192
V I	To	} 161
F I	To	
Pa	D SuL	85)
Ma	Ni TSeN	177
M I	Ni Ha	174
Ma	NuSHeN	178
Ma	NuSia	} 183
oRaN	G	
BaaRaN	G	194
Boo	N	184
Ma	NuSH	179, 166
Ma	NuSH	} 169
Mu R D		
MuuR D		168
Me	ReTe	} 170
Me	SHio	
Me	S	57
Mi e	Z	56
Mo u	T Z	29
BahaR	SHi	51, 52
BahaR	SH	50
Mu R D		65
Mu R T		60
Mo R T		59
Ma R T		107
Ma R D		—

	Mu	Ru	F	77					
	Ma	Re		110					
	Ba	Io	L	139					
	Bo	Io		140, 146					
	Ba	Io		141					
	Bo	Ie		142, 138					
	Ba	I		143					
	By	I		144					
	Be	I		145					
	Bo	ε		140, 139					
	Ba	R		13)					
	Fa	R		16)					
	Vi	R		Latin					
	Be	R		47					
	B	Re		25					
	Mo			Old Irish					
	Mo			Mandingo					
	o	M		46					
	o	Mo		23, 24					
	Ho	Me		28					
	Cu	M		69, 127, 128					
	Cuu	M		126					
	Cu	B		75, 130					
	χY	B		129					
	Ge	Va	R	83					
	G	Oi	R	13)					
	N	G	Uo	I	182				
	TaN	Ga	Ma		191				
	i	Gue	B	Na	171)				
	i	N	Ge	Mi	N	}	54		
	i	χ	Mi	ni	N		56)		
	i	N	Ge	Mi	Ne		55		
	i	N	ne	Mi	Ne		123		
	e	N	Me	T	Shi		122		
	Ne	N	Me	T	Sh		}	56	
	a	L	Ma	T	S			61, 62	
	u	L	Mu	T	S		163)		
	Lo	Ma	N				175)		
	Ne	L	Ma				193		
	Se	Ra	M				189		
	Se	Ro	Ma	a	N		}	121	
	So	No	N	Ma	N			124	
	Ne	Ne			T	SHe	}	120	
	Me	Ne			T	SH		200	
	e	N	Ne			T	SHe	197	
	Nii	Ne				T	S	}	196
	Lu					T	S		198
	Te	N	Ga			Ta		}	70
	Te		Ga			Ta			15
	Te		Ha			Ta		70	
	T		a			Ne		}	113
	Ti					Ti			112
			Ho	Ie		T		}	72
			Ho						70
			Gu	I		Zo	N		70
			Gu	I					113
			a	Gu					112
			Gu						
			Ca			Zi		}	
			χ <sup>o</sup>						

	Ca	Za	132, 134
	χ <sup>a</sup>	Sa	131
	Ce	Se	104, 102
	Ci	Si	106
	Ci	Shi	92, 94)
	Cy	Shy	95, 97, 101, 120
	Cy	She	91
	Cu	Shy	98
	Cy	Zhe	99
	Ga	Se	74
	C	Shi	70) 89) 90, 91) 103
	Ce	S	70)
	KuDaCe	S	58)
	Ce L Go La		155)
	χ La Vo L		157
	ui T Hu La		154
aJeN	Ta VyLa N	}	153
Nu	Te iRa N		
Sa M	S Ha L	}	155
tShaN	Ds a La		
CuRuSa M	Ga		160)
C RoS	TsHuha		159
uScaM	Z Ha		160) 158
	Z a Lai		78
elleM	Co LLe S		69)
iri	Go Lo S		68
	Co LLe S	}	66
	C La S		
	Co Ly S		67
	i Li T		147
	Hi T		150
	Ce T		151
	Ci T		148, 152
	Cu N		136
	Ga D Zhe		166)
		D Zhi	164
	Ca DtShi		108
	Co D Shi		109
	Co u N Shi		147
	Co iu N G		125
	HoMi NiS	}	22
	HoMo		
	Ho N S	}	27
	Jo Mi		
	CyMy N	}	137
	Cy N		
	CuMu N G	}	135
	Cu N G		
	Ne Ri		45
	Ne ReSh		170)
TsHerioL			8
TsHi	L Ve C S		43
TsHe	Lo VieC		1, 5, 11, 12
TsH	Lo VieC		2, 4, 7, 10
TsH	Io VieC		3
TsH	Lo Vi C		6, 9
TsHi	L e C S		44
Ts	Mo GuS		42
TsHe	Ke Vi		53
TsHu	G		111



	TsHu		117, 119	
	TsHe		49	
ts ho	TsHi		48	
	St e	G	114	
	St a	G	116	
	S ie	K	115	
	S He	χ	85	
	He	Ka	118	
		La	79	
		Le	G	80
	LaKi	La	Ki	184
D	Ui Ne		17	
D	i N		18	
D	e N		14, 19	
	e N		63	
eDeM			64	
S	i N		65	
aDeMi N			82)	
uDoM			48) 81, 89) 93)	
aDaM			76) 77, 85) 88 94) 102, 105	
aDeM			167, 169)	
aD	Mi		186, 187	
TaVo			166)	
RoM				

*Changes in the Word HAIR.*

Fa	164		Pa R	Pe	Comanche
Mu	77		B Le	BeN	14
Pe I	29		Ve Li SoC		12
Mu I	92)		Pa I	CaoP	67
Mo I	76, 102		P La u	Cai	42
Ma Lia	21		Bo h o C		187
Ma Ou	China		Bu a C		186
Py R	46		Fu Ne	χe	163
Pa U			Pu N		192
Pe L	} 27		Pe S	Cennet	115)
Va L	167		Ma Z		107
Ba L	169) 177		Ma z Da		171)
Mo Ria	190		Ma t Ti		43, 44
Ba La	166		Be d SHe		116)
uWa Ra	Tuscarora		Pa t u		110
Pi R Su	Penobscot		P teDa		131
P RuSa	Robber Di.		oP tiDa		130
Ba Ra S	72		oB De		134
Wo RoNG	Lake Mac.		iB De		133
U Ra N	Wellington		aP Ty		132
U L Lea	15		oP Te		127, 129
Vo L T	17		oP T		126
Vo Lo S	11		aUo T		73, 74
Vo Lo Se	0		oP Ta		
Ra S	114		oBi T	}	71, 75
CaZhe	Re SH		uPa T		72
	Le SH		HoP T		130)
	Lo SSi		nGaP Ta		125
V o SSo	7		nGoP T		122
V Lu SSe	9		ngeeP Ta		
V La S	1, 2, 4, 5)		GyP Ty	}	121
V La S			GeP T		120
P Ra M }	3		C O D		49

C O	Do	53
C A	DzH	115
K I	toNG	Sidney, &c.
G I	toNG	Liverpool
G I	a N	Bathurst
KuBoaeu		Moreton B.
K Poa	Ti	} Mexican
G U I	TsChil	
A Ro	Chia	Onondago
C O	nuoz	13
G Ra	GG	16
G I	o Go	200
χ I R	Gi	188)
C Y L		88
H A	LaL	48
χ A	I	47
H AaR		33, 34, 35
H AiR		32, 40
H A R		38
H OiR		41
H O R		31, 37, 39
H O R		} Huron
K UiR		
eHeVeU	X	28
KaPi L	Le	24
KaPeL	Li	23
KaVeL	Lio	25
KaBeL	Lo	26
GoA L	T	18
KaB a	D	186)
KeV o	Dio M	193
G U	BiN	160
C A R	B	55)
C U I	Ba	158
Ci R	BiT	157
CyPy	H UiR	153
G U Ru	G U Ru	} 197
U Ru	U Ru	
Lo	U Ru	196
	H U Ru	191
	U Ru	196)
Ca L	Ga SseN	137)
tJe L	Ga D	155
nJ U Ri	C Tu	138, 141
C Ie	C U L Ta	87
H I	N Ga R N	149
χ I	N Ga R N	150
χ I	N Ga	152
aGi O n s	Ko	Hochelaga
Ce	Tj G URi	154
tJe Ra	χe R	} 159
tJe RoN		
nJ U Ri	C Ta	139
mJ U Ri	C Ta	140, 146
nJ U Ri	T Ta	143
nJ U Ri	Ta	145
n U Ri	T	144
in Be	Di C Ta	142
	i C Te	78
n O	G U N	} 136
U	H U N	

esa	R	C	U	N	}	79
dsi	c	C	U			
zi	B	Ca			}	54
	u	Ca				
Hi	U	χ <sup>i</sup>			}	55)
Hi	U	C	SeT			
i	U	s	SeD		}	137)
U		s	SeN			
y		s	SeN		}	Mexican
i		C	S To			
		C	S To		}	3
		C	SiL			
		Co	S Se		}	5
		Co	Sa			
Ci		Ca			}	27)
C	RaNs					
C	RiNis					22
TaG	L					29
TaiK	U L					Peel Riv.
Ti a	U R					Muruya
T Je	R					61
T Ja	Ra					117
T J U	L					168
T J U	Ly					169
D J O R	S					60
D J O R	Si					81
D Ji	R Si			}	}	65
e	R Si					
T sa	R			}	}	85
ShiGa	R					
Shiie	R			}	}	62
Ze Ga	R					
Sa a	R			}	}	84
Se a	R					
Si a	Ru					81
eZ	Ha c	Ce				83
dZ	Hi c	Ca				
ei	Ga					Nagailer
oie	Ga					Chipewyan
T Je		χ				
T	U c	Cu				
T	U c	CasaB				
T	U c	Ca P				
To		N Ge				151
T	Ue					128
Ts H	Ua					114
TLoTs	U					118)
Ts H	Me					119
T	Ma					108
Tum	Me					Waccoon
To	Ma					109
oTo	P					102
	Jo P			}	}	63
	u P					
	i P					
	u Vo					199
Sa	Pi					88
Sa	B					71)
Za	B					50, 52
monZa	Bo	N				Souriquois

Sa	U	TsH	}	99
tS	Ha	TsH		
S	Ho	sH		97
tS	Ha	TsH		96, 98, 101, 104
Sh	Ha	TsH	}	111
u	χ <sup>a</sup>	T		
Si	o	Ts		27
tS	He	Ts	} LcR	89
tS	He	Ts		
tZ	a	Ts		90, 94, 95
S	a	TsH		92) 93, 103, 105, 91
S	e	S		91)
S	y	S		64
yS		Sy	}	135
NoS		Sy		
oT		Ta		66
yT		a		123
yT				124
aT				66, 68
oT				69
aS				109
aeTi				Vogul
NuiaT				Kuskatchewak
Nuia K				Labrador

*Changes of the Word HEAD.*

Pe	54, 57
Pa	162)
i Po	200
uPo	191, 196, 199
euPo	197
eoPo	195
uMa	} Quichua,
hoMa	
Bo PPe	Florida Waccoon.
Bo PPe	Yaoi.
BouPou	Carib Islands.
oPouBou	} Carib of the
ouPouPou	
PaoP	162
Vo Ba	7
Uai Ve	58
Bui	63
Pci	18
Poi	54)
Pee	55
Pie	56
Wih L	} Delaware
Wi Le	
Wi L	} New Sweden or
Wij R	
WyeR	} N. America.
MaaR	
Mie R	118)
ie R	65
e R	65)
o L	75
o Lo	187

	uLu	132, 133
	oLol	126
	oLlo	127, 129
	BoRla	Italian Robbers.
	BuRua	Basque.
	PuRa	Australian, Peel R.
	PoLl	English.
	P Re	62
	P Re	61
	VaRi	124
	ShuB Le	Caucas. for forehead.
	LaNC	Araucanian, S. Am.
	Pa NC	68
	Po NCe	69)
	Pa NGa	67
	Pa NCuN	66
	Be CeR	57
	Be Gke	Aymara, S. M.
	Pa Ccha	} Yarura in
	Pa Cchu	} South America.
	Pa Cuacua	Mobima, S. Am.
NuChi	Bu Ku	Maipoor, S. Am.
	Be C	117, 119
	Ba G	171)
	Wa SSijehe	Arawackan, S. A.
	Ba SH	88, 106
	Pa SH	14)
	Bo S	64
	B SHi	63
	Pe N	14, 15, 18, 27)
	Ba i N	194
	PeD N	19
	BuDiaN	Wellington, Austra.
	WoLoNG	Lake Macquarie. Au.
	BaLa NG	Bathurst, Australia.
K	WaR Te	Caucasian, 4.
C	Ua R Te	} 115
C	o R Te	} 114
C	a R Ta	45
C	o RieT	Italian Robbers.
Chi	u R La	
C	i RaSSu	} 172
C	i RaHe	} 130
H	o LaD	155
C	o LaTsH	
C	u Lu C	} 107
C	u L χ	
C	o L Ca	152
C	o L Ce	148
C	o i Go	151
aC	aNGa	Tupi, S. America.
aC	aNG	Suaransch.
iaH	aNGe	Brazilian.
iCaii		Mocabi.
aCa		Guaransch).
iaKa		Caucasian, 1.
oiKe		58
iiKa		112
aGa		113
oG		71

uχ			70
oG			Huastecan.
Ka			Mudgie, Aust.
Go			165
Ka	Mi	KuK	Kuscatchewan.
Ga	Vu	NG	8
Co	M	TCo	155
Ca	Pu	T	22
Ca	Be	Za	26
Ca	Be	Sa	25
Hau	Pi	T	30, 32
Hau	P	T	35
Hö	F	T	34
Heo	Fo	D	31
Hu	Vu	D	39
Hö	Fu	D	38
Ho	Be	D	37
Ho	P	D	40)
Ai	Va	Da	130
Ha	i	D	41
He	a	D	32
NisCo		Ne	Villela, } South
To Co			Lule, } América.
Ka	Ba	Ra	Australian.
Ca	Pa	La	183
Ke	Fe	Le	20
Ce	Pa	Li	21
Co	Be	L	} 159
Ca	Ve	L	
sChi	a	Ra	Gypsey Borrow.
tJe		Ro	} 166
s e		Ro	
χe		Ro	} 70)
oG		Lu	
uGo		L	72)
eCa		R	79)
Ca		R	76, 77, 102, 167
Ce		R	} 168
Ci		R	
Jo		R	59, 60, 65
Za		R	65)
Ze		R	77, 78, 79) 80
Ga		L	13)
Ga	Lo	Ba	O Russian
G	La	Va	1, 2, 3, 5
G	La	Ba	11
Go		Tio Ba	12
G	Lo	Va	6, 10
G	Lu	Ba	9
H	la	Va	4
o	Lu	Va	174
	Le	Bu T	154
	Lo	Vu T	157, 153
	Le	u T	153
	Ne	MbaT	131
	Ne	Mai T	} Abipona,
	Na	Pa NC	
	Na	Ma GaT	} South
	Nha	Mba	American
	Tsa	Mbu	Cariri, S. A.
			134

		Ta Vi	}	Caucasian
	Ka	Vi		73, 74
		Ta Bi		108
		Du P		Mohegan
		aDa Ma		161
		TsheM		69)
		TsheN		17
	C	sheaN		16
	aBa Ra Ca Ma			Cayubaba, N. A.
	uGo M			73, 74
		Ce M		49
		Ga Po		23
		Ca Po		24
		Ko Pf		34, 35
		Ca P		27, 46
		Ga P		13
		Co P		40
		Ga U		180
	Ne	G Ui Lo		Mbaya, S. Am.
	Tai	Ga Vo R		175
	Te Na	Ca M		156
	Do Lo	Ci N		145
	a R	Ce M		70)
	T	Cu M		110
	T	Ci N		53
	CT	χ <sup>y</sup> N		158
WiLuSTi		Ca N		Minsi, N. Am.
	To	Gai		150
	Ta	Gai		149
	Tu L	Gai		136)
	To Lo	Goi		135, 137)
	To L	Go		137)
BumT		C		186
Be De		Ge	}	170
MeSTe Re G		Ni		
MaSTe R		T		171
Be Te R				50, 52
Ma Ta				169
Mo No Li				147
	Ta La			177
	Ta Li			176
	Da Lei			178
	Tu La			179
	De Li			138
	Do L			145
	De L			144
	Di L			140
	Dy L			139, 141, 142, 143, 146
	Do i			173
	Te U			164
	Da U		}	182
	T U			
	Ty			151
	Öie			Naguiler
eDÖie				Chippewyan
TeNeTÖie				Hudson bay
TêTe				28 (French)
ToTao				29
aDaDa				48)
DuDi				109 (Caucasian)

TioS	Te	27
T eS	Ta	23
eN	Da S	184
	Na SchKo	Kadjak } N.
	Na S KoK	Tschegarr } Am.
	Tu S	69)
uD	Zu	163
echu	Ja	Sapebocana, S.A.
T	Ju Sha	160
	T Sha	111
	Ri Sha	87
	Re Sho	84
	Rei Sho	83)
	RuiS MaN	171)
	Ra S	86
	Ro Sh	81, 82 (Hebrew)
	RaaS	} 85
	ReeS	
	ReoS	83
	Ro Sa Ca	= "my head" in Betoï, S. Amer.
	Na c sMu	} Othami
	Na	

*Some of the Phases of the Word HAND.*

EcSe		Peru, Chequito.	
iS		Lule, Paraguay.	
iSiG		} Villelue ,,	
iSi	P		
	Po	} Brazilian Tribes.	
	Poo		
	Poh		
	Mbo		
	eMe		
	GePo	} Lower	
	eHoPa		Orinoco
iccHi	Mo		
iccHi		} Carib Isles	
uCaBu	Ho		
NouCaBo		} Maypure	
Nu CaPe			
La GeBa		165	
χaMaRa		124	
CuMuR		} 48, 57, 42	
CeVeR			
C UeR		50	
χε	iR	20	
χε	Ri	21	
χi	Ria	12	
C Y R		117	
Ga	R	135, 136, 137	
C O L		98, 99, 42)	
	O L	86, 42) 89)	
C U L		90, 94, 89) 91) 104	
Ca	L	95, 96, 97, 101, 91) 105, 101) 102	
χa	L	94	
Che	Li	108	
Ga	La	141, 163	
Ga	Lε	} 140	
N e	La		



NGa	La	143
N a	La	142
N a	Li	146
NGa	L	} 144, 145
oNCo	C O L	
CeNGa	R	150
CeNGa	Ra N	149
Mi NaGi LGe	N	153
Mi N	Gi La N	157
CoNMeN	$\chi$ La N	156
MyN	Ga Ga TZ	154)
$\chi$	Ca TSh	158
$\chi$	Ce TZ	155
	Ca Z	118
C	$\chi^e$ Zi	} 54
tsHe	Si	
Ji	T	85
Ci	Z	47
Ce	Zi	55, 56, 57
Ce	S	} 74
C O	Ta	
Ca	T	66, 68, 69, 167
C O	T	74
C O	Da	49
Ci	T	71)
Ci	To	125
Ha	D	169, 173
Hu	TTe	131
Cy	TTe	160
Ha	aT	168
Ha	Te	} 177
ea	i	
Gi	eT	58
Ha	nT	36
He	nT	33
Ha	nD	31, 32, 34, 35, 39, 40
Ho	nD	37
HaM	DuS	30
HaU	N G	41
C U L	G	} 115
C U L	Cu	
C Ui	C	} 114
C U	Ci	
C U	$\chi$	80
C O	$\chi$	79
C U U	Gh	} Araucanian
C U U		
C Ue		
Cii		
Hiaa		192
$\chi^e$		109
aHh		111
SHi		110
SCi		179
SHeU		184
Ca	TaLa	134
Mu	De TaR Ca	123
u	De Na Ga	120
u	Da Da	130
u	TuNoL	129, 128, 127

Ta	aLo	79, 118	
u	DoL	75)	
	NoLi	}	
	NeLa		136
dZeLa	N	}	
tSeR	N		117
tSeR	C		
DoR	N	19	
DuR	N	14	
D	Ra Na	17	
D	RieH	86	
DoR		45	
Te	C	162	
Na	C	119	
To	GoN	151	
To	oN	152	
To	No	159	
ShTo	N S	154	
aN	GoShT	}	
T	eS T		76
D	aS T	77	
D	eShT	102)	
aD	eSh	100)	
D	uS T	109	
T S	eS Te	110	
S	HeShT	77	
	HaS TaM	172	
	aSh	78	
L		180	
Lee		180	
iRi		134)	
Tai		182	
Te		161	
uDa		121, 120, 75	
iDa		84	
eDa		}	
eD			81, 82, 83
FeN		}	
iT			86

Many of the above combinations are proven by the fact of their occurring in the same language, the same group of dialects, or the same group of well studied alliances. Many others are easily disproved by criticism, being mere coincidences. And many are probably misplaced, as to the range of their radicals in the vertical rows, and might be placed to far better advantage to exhibit the law of insensible gradation. But the reality of the law is seen from these tables to be indisputable, and the further multiplication of tables will but heighten the illustration of the law. Arrange any one of the words of the Parable of the Prodigal Son, translated by the Antiquarian Society of Paris into the seventy or eighty local dialects of France, and the law is at once established. The most incongruous and dissimilar forms are seen to be organically derived from one another. The French words *filz* and *garçon* and the English *booby* are but widely separated

fragments of a series of forms regularly graded like the words of the preceding tables. Bou-eBe, Bou-Be, Fiu, Fieu, Fi, Fe, FaiL, FiL, FiL-G, VaL, VaLeT, FaNT, afFaNT, eNFaNT, eNFaN, afFaN, aFaN, eFaN, eFoN, MeNioT, MeNeGe, MaiNaChé, G-aR-ChéeN, GaRChouN, GaeChoN, GaiChoN, GouGeaT, GouiaT, Gouia, GaRCouN, GaRCoN, GaSSoN, HiL, and an abnormal form DRoLei, belonging to some other series, or to a part of this series too distant to appear more than this once among the French patois; in fact a word bearing the same relation to the English DRoLL that FiL does to FooL, that Boube does to Booby (German Bube, Boy), &c. &c. The most interesting point of this series is the change of FiL to HiL, through some lost form H'FiL or G.FiL, the reverse of which still remains in FiL-G, MeNaGe, &c. This lost form is found in other languages; as in the Dshar Lesguis Caucasian KiMiR, Child, contracted in Hungarian (as in French patois) to Gi'eR-mek, child. In the Lesguis Antshong and Chunsagh, on the contrary, we have TiMiR, the original, so to speak (through Ti'eR), of the French patois DRoLei; as in the Georgian Suaneti we have BoBosh (Imeritian Boshi) to explain the French patois BouBe, a contracted repetition of the original Hebrew form BaR-BaR, the diminutive of BaR, boy.

---

*Stated Meeting, November 18, 1859.*

Present, eighteen members.

Dr. WOOD, President, in the Chair.

Judge Carleton, a new member, was presented by Dr. Bache.

A letter was read from Dr. W. A. Hammond, U. S. A. dated Fort Mackinaw, Michigan, Nov. 5, 1859, acknowledging notice of his election.

The following donations for the Library were announced:—

- Journal Franklin Institute, No. 407. (Nov.)—*From the Institute.*  
 African Repository, XXXV. No. 11. (Nov.)—*From A. C. Society.*  
 Columbia College Annual Catalogue. 1859-60.—*From the College.*  
 Inau. Addresses by T. W. Dwight and G. P. Marsh.—*From the same.*  
 Pasigraphie mittels arabischer Zahlzeichen. Ein versuch von Moses Paic. Semlin, 1859.—*From the Author.*  
 Natural Philosophy, by B. Hobson, M. D. London Miss. Society, Canton, China; in Chinese, unbound.—*From Dr. F. Bache.*